FAQs *for buying a* Small Wind System

Are you thinking about generating your own electricity? Here are some ***F***requently ***A***sked ***Q***uestions that can help you decide if investing in a small wind electric system is right for you.

Q What is a small wind electric system?

A small wind electric system uses the wind's energy to produce electricity. A turbine spins on top of a tower to turn the wind into usable electricity for your home or business.

Q Why should I consider buying a small wind electric system?

- Reduce or eliminate the amount of electricity you purchase from your utility or electric service provider.
- Save money on your electricity bill and protect yourself from future price increases.
- Generate clean, renewable and reliable electricity.
- Help your community by reducing the load on the electricity grid and provide additional electricity for the grid when your system generates more than you use.

Q Do I have a good site for a small wind electric system?

Your site must have enough wind to make the system effective, and most systems only require modest wind resources. To evaluate the wind resources in your area: Northern CA: [**rredc.nrel.gov/wind/pubs/atlas/maps/chap3/3-54m.html**] Southern CA: [**rredc.nrel.gov/wind/pubs/atlas/maps/chap3/3-55m.html**]. Your site must also have room for a tower for mounting a wind system. The area required for a tower depends on the type you select, but generally you must have at least one-half acre of land.

Q What should the size of my small wind system be?

Your system size depends largely on the wind speed, the tower height and the available amount of land. You can pick a wind system to match your electricity needs and budget. The average household in California uses about 6,500 kilowatt-hours (kWh) per year. Depending on the wind resource at your site, a system ranging from 5 to 8 kilowatts would be adequate to meet your electricity needs. You could also install a smaller system of 1 to 2 kW to offset the amount of electricity you purchase from the grid during peak load times when electricity costs are highes. When your system generates more electricity than you use, you can benefit through a "**net metering**" program.

Q What is Net Metering?

Net Metering allows you to "bank" any surplus electricity your system generates on the electric grid. For example, excess electricity might be generated during the day when your system produces more electricity than you use. During this time, your meter would simply run backwards to record the amount of electricity your system has banked onto the grid. Later, you can use an equal amount of electricity without incurring a cost.

If you use more electricity from the grid than your system has banked, your utility will charge you annually for the difference. If your system produces more electricity than you need on an annual basis, your electric service provider may purchase it, but is not required to. Check with your utility to see if they are willing to buy your wind electricity for resale to their other customers. For more information, visit "ABC's of Net Metering" at [**www.energy.ca.gov/renewables/documents/education_documents.html#materials**].

Q What should I know about towers?

Wind systems need to be placed on top of a tower to rise above the turbulent winds close to the ground. Tower heights range from 30 to 120 feet, although the average height is about 80 feet. There are two main types of towers. Guyed towers have guy wires anchored out some distance from the tower's base and are less expensive, but require more space. Self-supporting towers are more expensive, but they take up less space. Towers are generally not installed on top of houses or other structures because they would cause vibrations and place large forces on the building during storms.

Q How much does a small wind system cost?

Although many factors affect the cost, an average wind system costs around $5 a watt, including installation, or around $15,000 for a 3kW system.

Q Are there any rebates available?

YES! The California Energy Commission's Emerging Renewables Program offers cash rebates on eligible wind systems that are less than 30kW and connected to the electrical grid. To find out what the current rebate level is, please contact the Energy

Commission (see toll free number, E-mail, or website below).

Q Am I eligible for a rebate?

If you live in the electricity service territory of Pacific Gas and Electric Company, Southern California Edison Company or San Diego Gas and Electric Company, and you are installing a system of less than 30kW, you are eligible for a rebate. Either you or your system retailer can apply for the rebate.

Q Are there any tax credits?

Yes, California offers the Solar and Wind Energy System Credit for taxable years beginning or after January 1, 2001, and before January 1, 2006. This can be used by taxpayers against their net tax in an amount equal to the lesser of 15% (7.5% after December 31, 2003) of the cost of purchasing and installing a solar or wind energy system after deducting the value of any rebate received. To be eligible for the tax rebate, your system must be certified by the California Energy Commission. For more information on the tax credit, visit [**www.consumerenergycenter.org/renewable/tax_credit.html**].

Q Are there any financing programs available?

Yes, the best way to finance a small wind electric system for your home is through a mortgage loan that includes a primary mortgage, second mortgage or home equity loan secured by your property. If mortgage financing is not available, look for other sources such as conventional bank loans. A list of companies that finance wind systems can be found at [**www.consumerenergycenter.org/erprebate/financing_intro.html**].

Q Are there any permits to consider?

When you install a small wind electric system, a building permit is required by local ordinances and by the Energy Commission's Emerging Renewables Program. In some local jurisdictions, tall wind towers must have a special permit, but we anticipate that the process will become more streamlined as local governments become more aware of the technology.

Q How do I connect my small wind system to the grid?

You will need to enter into an Interconnection Agreement with your utility to connect your system to the electric grid. This agreement addresses the terms and conditions under which your system will be safely connected to the grid and specifies the metering arrangements (called **Net Metering**).

Q How do I find a small wind system retailer and installer?

The Energy Commission and the American Wind Energy Association both provide lists of wind system retailers. Retailers either can provide installation or can refer you to installation contractors in your area. Try to find a company located in the area where your system will be installed. Here are some other considerations to address when you select your retailer and installer:

- Does the company have experience installing grid-connected systems?
- Does the company use licensed California contractors?
- Does the company have any judgments or liens against it?
- Will the company provide references of previous customers?
- If you get more than one bid, make sure that the bids are for the same system.

Q How can I get more information?

Learn more about the Emerging Renewables Program rebate, the state tax credit, and other helpful information from:

California Energy Commission
Call Center: (800) 555-7794 or
(916) 654-4058 for outside California callers
E-mail: renewable@energy.state.ca.us
www.consumer**energy**center.org

For more information about wind energy, contact:

The American Wind Energy Assocation
122 C Street NW Suite 380
Washington, DC 20001
(202) 383-2500 www.awea.org

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